



## **DETAILED ACTION**

This Office action is in response to applicant's amendment filed on 15 February 2006.

### ***Allowable Subject Matter***

1. Claims 1-18, 20-23 are allowed.
2. The following is an examiner's statement of reasons for allowance:
  - Claims 1-10 are allowed because the prior art of record does not teach or suggest, in combination with the other claim limitations, a method for forming a top oxide for a semiconductor device that includes forming a nitride liner over a polysilicon stud that is above a polysilicon fill in a deep trench, combined with the steps of depositing the top oxide over the semiconductor device and forming a planarization coating over the top oxide;
  - Claim 11-18, 20-21 are allowed because the prior art of record does not teach or suggest, in combination with the other claim limitations, a method for forming a top oxide for a vertical transistor device that includes forming a liner over a

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polysilicon stud that is above a deep trench that is filled with doped polysilicon, combined with the steps of depositing the top oxide over the vertical transistor device and forming a planarization coating over the top oxide; and

- Claims 22-23 are allowed because the prior art of record does not teach or suggest, in combination with the other claim limitations, a method of forming a semiconductor device that includes forming a liner over a conductive stud that is formed in at least an upper portion of a trench that is formed in a semiconductor body, combined with the steps of depositing a top insulator over the semiconductor body and forming a planarization layer over the top insulator.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen W. Smoot whose telephone number is 571-272-1698. The examiner can normally be reached on M-F (8:00 am to 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr. can be reached on 571-272-1702. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SWS